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09/632,395	08/04/2000	Dale A. Scholtens	06269-029001	1974

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EXAMINER

MCLOUGHLIN, MICHAEL I

ART UNIT PAPER NUMBER

2662

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7

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/632,395

**Applicant(s)**

SCHOLTENS ET AL.

**Examiner**

Michael I McLoughlin

**Art Unit**

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/04/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 and 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1-5, and 18-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Allen, Jr. et al. (U.S. 6,169,735), hereinafter referred to as Allen.

Regarding claims 1 and 18, Allen discloses a method and software of providing communication services (see figure 4, and column 7 lines 66-67) comprising:

- Provisioning a packet network connection having packet channels (providing permanent virtual paths, or PVPs having virtual connections or VCs, see column 11 lines 26-44) each of which is independently capable of carrying narrowband signals so as to emulate a private line circuit (provisioning leased private lines, see column 17 lines 16-17); and

Art Unit: 2662

- Establishing a narrowband private line that traverses the packet network connection using a particular one of the packet channels (a DSO that traverses the PVP using a particular VC, see column 15 lines 39-40).

Regarding claim 2, Allen discloses the method of claim 1, including establishing another narrowband private line that traverses the packet network connection using another one of the packet channels (treat one or more DSOs in a T1 circuit as individual ATM VCs, see column 9 lines 31-32).

Regarding claims 3 and 19, Allen discloses the method of claim 1 and the software of claim 18, including associating a dedicated narrowband circuit with the particular packet channel, wherein the narrowband circuit forms part of the private line (associating the switched virtual connection to the corresponding DSO on lines 39-40 of column 15 that implies associating the narrowband DSO to the VC on provisioned private lines, see column 17 lines 16-17).

Regarding claim 4, Allen discloses the method of claim 3 including providing a dedicated narrowband circuit connection to a port of a gateway associated with the packet network connection (providing a dedicated trunk or DSO connection to a line interface; see column 15 lines 8-9 associated with the PVP, see 6 of figure 6), wherein the gateway is configured to perform adaptations between circuit-switched bearers and packet-switched bearers (wherein the T-IWF 28 of figure 4 is configured to perform adaptation between circuit-switched bearers and packet-switched bearers per CES; see column 9 lines 15-32, or AAL1, see column 9 lines 63-66)

Art Unit: 2662

Regarding claim 5, Allen discloses a method of providing communication services comprising:

- Provisioning a packet network connection having packet channels each of which is independently capable of carrying narrowband signals so as to emulate a private line circuit (provisioning a PVP with VCs see column 11 lines 26-44);
- Establishing a narrowband private line that traverses the packet network connection using a plurality of the packet channels (establishing an nx64 Kbps service for a narrowband private line to connect DS1 equipment across emulated circuits on the ATM network that traverses the PVP on individual ATM VCs for each DSO or n, see column 9 lines 25-32).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12-16, and 22-~~25~~ are rejected under 35 U.S.C. 102(b) as being anticipated by

Almay, U.S. 5,809,011), hereinafter referred to as Almay.

Regarding claims 12, and 22, Almay discloses a method and software (processed by software on lines 3-4 of column 5) of providing narrowband communication services (narrowband service such as Frame Relay, see column 1 line 13, or HDLC; see column 4 line 28, adapted per AAL1 or AAL5, see column 4 lines 43-44) comprising:

- Rolling over a narrowband communication line that traverses a channel in a first virtual circuit connection in a packet network to a channel in a second virtual circuit connection in the packet network (referring to figure 1, rerouting a subscriber line that traverses a virtual channel in a virtual path a-b

to a virtual channel in a second virtual path B-A, and see column 4 lines 53-54).

Regarding claim 13, Almay discloses the method of claim 12 wherein the narrowband communication line is a private line (a private data line between a LAN at Subscriber A interconnecting a LAN at Subscriber B using an internode trunk line see column 4 lines 28-34 and conveyed over a permanent virtual circuit, see column 2 line 29).

Regarding claims 14, and 23, Almay discloses the method and software (processed by software on lines 3-4 of column 5) of claim 13 including:

- Broadcasting traffic from a narrowband circuit over the channels in the first and second virtual circuit connections (routes a-b and A-B are thus active, i.e. the node A will receive traffic pertaining to the connection from both routes, see column 2 lines 65-67 and since rerouting is made to routes bidirectionally, see column 2 lines 46-50, node A also transmits on both routes).

Regarding claims 15, and 24-25, Almay discloses the method and software (processed by software on lines 3-4 of column 5) of claim 14 including:

- Detecting packets at a receiving end of the channel in the second virtual circuit connection, wherein the packets contain information representative of an association between one of the channels and the narrowband circuit

Art Unit: 2662

(receiving ATM cells with VCI, VPI, and subscriber line identification such as DLCI, see column 4 lines 48-59);

- Establishing a path from the receiving end of the channel in the second virtual circuit connection to the narrowband circuit (activate the new link or A-B of figure 1, see column 4 lines 60-67);
- Releasing resources associated with a path from a receiving end of the narrowband circuit to the channel in the first virtual circuit connection (deactivate the old link or a-b of figure 1, see column 4 lines 60-67).

Regarding claims 16, and 23, Almay discloses the method and software (processed by software on lines 3-4 of column 5) of claim 12 including:

- Broadcasting traffic from a narrowband circuit forming part of the communication line over the channels in the first and second virtual circuit connections (routes a-b and A-B are thus active, i.e. the node A will receive traffic pertaining to the connection from both routes, see column 2 lines 65-67 and since rerouting is made to routes bidirectionally, see column 2 lines 46-50, node A also transmits on both routes).

Regarding claim 17, Almay discloses the method of claim 12 wherein rolling over the narrowband communications line to the channel in the second virtual connection is transparent to end-users (rerouting to the second virtual path A-B is performed by nodes A and B and transferred with minimum data loss, see column 1 lines 47-48).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-11, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen as applied to claim 1 above, and in view of ITU-T Recommendation I.366.2, hereinafter referred to as I.366.2.

Regarding claims 6, and 20; Allen discloses a method and software (see column 7 lines 66-67) of providing communication services comprising setting up multiple private narrowband lines associated with different entities (one or more narrowband private lines or DS0s in structured DS1 nx64Kbps, see column 9 lines 25-32, wherein the private lines traverse multiple virtual circuits), but fails to teach multiple private narrowband lines associated with different entities that traverse a single virtual circuit in the packet network.

**In Addition**

Allen discloses ITU-T Recommendation I.363.2, B-ISDN ATM Adaptation layer specification: Type 2 AAL, in column 10 line 34, wherein I.363.2 uniquely identifies channels within the AAL2 VC with a CID (see Figure 4/I.363.2) that applies to **claim 7** below, and includes layer management (see section 8.1 of I.363.2) that applies to removing AAL2 channels that applies to **claim 8** below.



Art Unit: 2662

I.366.2 teaches structuring DS0s in an  $N \times 64$  kbits/s where  $N=1$  (see ANNEX J of I.366.2) and each DS0 is a channel within a single AAL2 virtual connection. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allen's method with the teaching of I.363.2 and arrive at the claimed invention by using AAL2 for  $n \times 64$  Kbps instead of CES or AAL1. One would have been motivated to make this modification to vastly increase network capacity by removing the VC limitation associated with only one DS0 per VC with AAL1 and increase the DS0 capability by up to 248 times with multiplexing in the AAL2 VC. Also, one would reduce the adaptation complexity of the method by using a single unified adaptation protocol (AAL2) instead of two different protocols (AAL1 and AAL2).

Regarding claims 7, and 21; Allen as modified with I.366.2 discloses the method and software (see column 7 lines 66-67) of claim 6; including associating dedicated narrowband circuits with respective channels in the virtual circuit (see ITU-T Recommendation I.363.2 disclosed by Allen in column 10 line 34, wherein I.363.2 uniquely identifies channels within the AAL2 VC with a CID, see Figure 4/I.363.2).

Regarding claim 8, Allen as modified with I.366.2 discloses the method of claim 6, and Allen further teaches treating private lines as individual DS0s (see column 9 lines 25-32) where the examiner interprets treating as provisioning and removing the individual DS0s, and individual removal of DS0s provides removing fewer than all of the private lines. However, Allen treats these DS0s as separate ATM VCs using CES or AAL1, and fails to teach treating

Art Unit: 2662

these DSOs as private narrowband lines that traverse a single VC in a packet network.

Modifying Allen's method with I.366.2 as cited in claim 6 above would include removing fewer than all of the private lines traversing the virtual circuit via the layer management of I.363.2 as disclosed by Allen and cited above.

Regarding claim 9, Allen discloses a communication system (see figure 4) comprising:

- Gateways configured to perform adaptations between circuit-switched bearers and packet-switched bearers (T-IWFs 28 of figure 4 configured for AAL1 and/or AAL2 adaptation; see column 10 line 4 through column 11 line 5); and

A packet network including a virtual circuit connection between a pair of gateways (an ATM virtual connection for DS1 nx64Kbps service, see column 9 lines 25-32 between a pair of T-IWFs), but fails to teach wherein the virtual circuit connection includes channels each of which is independently capable of carrying narrowband signals so as to emulate a private line circuit. I.366.2 teaches a virtual circuit connection that includes channels each of which is independently capable of carrying narrowband signals so as to emulate a private line circuit (DSOs in an  $N \times 64$  kbits/s where  $N=1$  and each DSO is a channel within a single AAL2 virtual connection see ANNEX J of I.366.2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allen's method with the teaching of I.363.2 and arrive at the claimed invention by using AAL2 for nx64Kbps instead of CES or AAL1. One would have been motivated to make this modification to vastly increase network capacity by removing the VC limitation associated with only one DS0 per VC with AAL1 and increase the DS0 capability by up to 248 times with multiplexing in the AAL2

Art Unit: 2662

VC. Also, one would reduce the adaptation complexity of the method by using a single unified adaptation protocol (AAL2) instead of two different protocols (AAL1 and AAL2).

Regarding claim 10, Allen teaches a dedicated narrowband circuit coupled to a port on one of the gateways in the pair to form a private line circuit (6 and 35 of figure 6 coupled to T-IWF A or B, and see DSO channel on its line interfaces in column 15 on line 9), but fails to teach the private line circuit traversing one of the channels in the virtual circuit connection. I.366.2 teaches DS0s in an  $N \times 64$  kbits/s where  $N=1$  and each DS0 is a channel within a single AAL2 virtual connection see ANNEX J of I.366.2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allen's method with the teaching of I.363.2 and arrive at the claimed invention by using AAL2 for  $n \times 64$  Kbps instead of CES or AAL1. One would have been motivated to make this modification to vastly increase network capacity by removing the VC limitation associated with only one DS0 per VC with AAL1 and increase the DS0 capability by up to 248 times with multiplexing in the AAL2 VC. Also, one would reduce the adaptation complexity of the method by using a single unified adaptation protocol (AAL2) instead of two different protocols (AAL1 and AAL2).

Regarding claim 11, Allen teaches dedicated narrowband circuits associated with different entities (6 and 35 of figure 6 coupled to T-IWF A or B, and see DSO channel on its line interfaces in column 15 on line 9), but fails to teach associating the different ones of the channels to form private line circuits traversing the virtual circuit connection. I.366.2 teaches

Art Unit: 2662

DSOs in an  $N \times 64$  kbits/s where  $N=1$  and each DSO is a channel within a single AAL2 virtual connection see ANNEX J of I.366.2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allen's method with the teaching of I.363.2 and arrive at the claimed invention by using AAL2 for  $n \times 64$  Kbps instead of CES or AAL1. One would have been motivated to make this modification to vastly increase network capacity by removing the VC limitation associated with only one DSO per VC with AAL1 and increase the DSO capability by up to 248 times with multiplexing in the AAL2 VC. Also, one would reduce the adaptation complexity of the method by using a single unified adaptation protocol (AAL2) instead of two different protocols (AAL1 and AAL2).

### *Conclusion*

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- 1) Petersen (U.S. 5,805,588), Circuit emulating exchange using micro cells.
- 2) Almay (U.S. 5,953,337), Traffic distributor in ATM network.
- 3) Hiraiwa et al. (U.S. 6,021,134), Cell/packet assembly and disassembly apparatus and network system.
- 4) Brueckheimer et al. (U.S. 6,023,465), Communication system.
- 5) Czerwicz et al. (U.S. 6,314,102), Telecommunications system for providing both narrowband and broadband services to subscribers.
- 6) Shenoda (U.S. 6,389,130), Public switched telephone network call routing using asynchronous mode transfer bearer voice trunking.

Art Unit: 2662


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael I McLoughlin whose telephone number is 703-308-7911. The examiner can normally be reached on weekdays 7AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

*MSM*

November 13, 2003

  
HASSAN KIZOU  
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